CONTENTS

Volume 17, Issue Nos. 1–5

OPTIMAL CONTROL APPLICATIONS & METHODS

VOLUME 17, ISSUE No. 1 — January–March 1996

ANNOUNCEMENT 1

Two-degree-of-freedom Controllers for Multivariable Model Matching Systems: Application to a Continuous Stirred Tank Reactor (CSTR): Y.-S. Chou and C.-Y. King 3

A Gradient Flow Approach to Computing a Non-linear Discrete Time Quadratic Optimal Feedback Gain Matrix: M. W. Cantoni, K. L. Teo, W. Y. Yan and V. Sreeram 29

Minimizing the Maximum Heating of a Re-entering Space Shuttle: An Optimal Control Problem with Multiple Control Constraints: H. Kreim, B. Kugelmann, H. J. Pesch and M. H. Breitner. 45

SHORT COMMUNICATION

Optimal Control of HVAC Systems using DDP and NLP Techniques: N. N. Kota, J. M. House, J. S. Arora and T. F. Smith 71

VOLUME 17, ISSUE No. 2 — April–June 1996

The Root Loci of H_∞ Optimal Control: A Polynomial Approach: S.-G. Choi and M. A. Johnson 79

Discrete-time Mixed-norm H_2/H_∞ Controller Synthesis: L. D. Davis, E. G. Collins, Jr. and W. M. Haddad 107

Linear Quadratic Optimal Model-following Control of a Helicopter in Hover: J. K. Pieper, S. Baillie and K. R. Goheen 123

SHORT COMMUNICATIONS

Optimal Vibration Control with Modal Positive Position Feedback: A. Baz and S. Poh 141

Indexed or abstracted by 'Cambridge Sci. Abstracts', 'Institute for Scientific Information (ISI)', 'Compumath Citation Index', 'Current Contents (CC) Eng, Tech & Applied Sciences', 'Engineering Index', 'Eng. Societies Library', 'INSPEC', 'Int. Abstracts in Operations Research', 'Research Alert (ISI)', 'SCISEARCH Database', 'Zentralblatt für Mathematik'.

Calculation of Discrete-time Process Noise Statistics for Hybrid Continuous/Discrete-time Applications: J. Farrell and M. Livstone 151

VOLUME 17, ISSUE No. 3 July–September 1996

A Non-linear Optimal Greenhouse Control Problem with Heating and Ventilation: I. Ioslovich, P.-O. Gutman and I. Seginer 157

Computations and Time-optimal Controls: C. Y. Kaya and J. L. Noakes 171

Probability-one Homotopy Algorithms for Full- and Reduced-order H^2/H^∞ Controller Synthesis: Y. Ge, L. T. Watson, E. G. Collins, Jr. and D. S. Bernstein 187

Optimal Bounded-state Control with Application to Building Structure: C.-H. Chuang and D.-N. Wu 209

VOLUME 17, ISSUE No. 4 October–December 1996

Modelling Monopolist Pricing and Protection Period Decisions for New Products Under Warranty: H. I. Mesak 231

Capital Accumulation of a Firm Facing Environmental Constraints: R. F. Hartl and P. M. Kort 253

Pollution Control and the Dynamics of the Firm: The Effects of Market Based Instruments on Optimal Firm Investments: P. M. Kort 267

Optimal Control of a Production System with Periodic Maintenance: F.-J. Krämer and S. X. Bai 281

VOLUME 17, ISSUE No. 5 December 1996

Rotational Speed Tracking for Hydraulic-motor-driven Machine-tools: V. Costanza, A. C. Tuncelli and C. E. Neuman 309

An Optimal Design Problem for a Two-dimensional Flow in a Duct: X. Wu, E. M. Cliff and M. D. Gunzburger 329

An Extended Penalty Function Approach to the Numerical Solution of Constrained Optimal Control Problems: B. C. Fabien 341

SHORT COMMUNICATIONS

On the Existence of Touch Points for First-order State Inequality Constraints: H. Seywald and E. M. Cliff 357

A Gradient Flow Approach to LQ Cost Improvement for Simultaneous Stabilization Problem: V. Sreeram, W. Liu, K. L. Teo and W. Yan 367

AUTHOR INDEX 377

KEY WORD INDEX 379